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ABSTRACT

The data from this study, conducted in conjunction with the Preparation through Responsive Educational Programs (PREP), indicate that no general statements can be made about the relationship among school absenteeism, juvenile delinquency, and other measures of school performance. However, the special approach used to reduce absenteeism did work for two of the groups of student subjects. One of these groups (each consisted of 18 male and 14 female students) was enrolled in the academic phase of the PREP program, which included individualized instruction in reading, math, and English. The other experimental group participated in the social skills component of PREP. And the third group, the control group, participated in no PREP activities. Attendance data for these junior high students from the year before indicated which ones had been absent the most. Instead of contacting parents only when students were absent, this approach entailed calling them or sending them letters when students had been present for a certain number of days. This positive approach increased attendance for the two groups involved in the PREP program components, though not for the control group. (DS)

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DECREASING ABSENTEEISM ON THE JUNIOR HIGH SCHOOL LEVEL

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The activities described here were supported principally by research grants (MH14443 and MH21950) through the Center for Studies of Crime and Delinquency of the National Institute of Mental Health, awarded to the Institute for Behavioral Research, Silver Spring, Maryland. Other support was derived from cooperating school systems and from school staff who were largely responsible for the success of the project. We thank both school and project staff for their invaluable assistance in helping to develop and implement the PREP program.

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This paper discusses an absentee program conducted as part of a larger educational research effort in a Washington, D.C., metropolitan area school system. The research program, termed PREP (Preparation through Responsive Educational Programs), is currently involved in developing an effective academic and social program for junior high school students with learning and/or behavior problems which can be incorporated into a school system and complement the traditional and currently-practiced approaches. The main features of the larger program are the use of individualized instructional procedures in teaching reading, language, and mathematics skills; a special class with PREP-developed curricula to improve social and communication skills; frequent contact with parents to keep them informed of their child's progress in school; the use of a motivational system based on principles of operant psychology; and special training for teachers. (For a more detailed description of the PREP program, see Cohen et al., 1974). The success of the program in terms of academic and social behavior gains has been demonstrated in several school settings (see Filipczak & Friedman, 1976).

The academic and social success of a student can be greatly hindered by failure of that student to attend school classes. Further, frequent absences have been demonstrated to be related to involvement in delinquency. As far back as 1926, Healy and Bronner reported that 40 percent of offenders in the Chicago and Boston areas had at one time been truant and had been considered an absentee problem in school. Glueck and Glueck (1950) found that 94.8 percent of a sample of 500 institutionalized delinquent boys had been truant, while only 10.8 percent of a matched non-delinquent group had been truant. In the CASE study (Cohen et al., 1968), it was reported that approximately

50 percent of the juvenile offenders involved in the program at the National Training School were considered to have been absentee problems by their school districts.

Despite the consistent findings of high rates of absenteeism in delinquent populations, it is difficult to determine if a causal relationship exists between delinquency and absenteeism. Part of the difficulty is that attendance problems may be related to poor achievement in school in general. Also, several authors have demonstrated that school achievement and delinquency are related (for example, Amos, 1975; Gold, 1970). Senna et al. (1975) performed a factor analysis of various measures of school performance. They arrived at three basic factors which are equivalent to academic achievement, social behavior, and attendance. They then studied the relationship between these three separate dimensions of school performance and self-reported delinquency and found that each of these dimensions was significantly related to delinquency. This finding supports the position that attendance is significantly related to delinquency, independent of any possible relationship between attendance and other measures of school performance. In previous research in a suburban junior high school, PREP had also found that attendance could be identified as a separate factor from academic achievement and social behavior in school.

Although it cannot be conclusively demonstrated at this point, it does appear that absenteeism may be a factor contributing to delinquency. If this relationship between delinquency and rate of absenteeism is accepted, then a logical implication would be the development of delinquency prevention programs that have school attendance as an important focus. For years educators have tried to deal with the absence problem, seeking out reasons and developing hypotheses to explain the problem, but, more often than not, failing to achieve any significant change in the behavior of the students.

Within recent years, there has been an increasing number of demonstrations of the usefulness of behavioral technology for education. Copeland et al. (1972) have directly applied this approach to the problem of absenteeism, using praise from a principal to the parents as a means of improving school attendance for a small number of students. Other authors (Brooks, 1975; King et al., 1975) have also applied a behavioral approach to the problem of school absences with mixed results.

The present paper reports on the results of a study in which a special feedback program, based on behavioral principles, was developed and implemented in an attempt to reduce absenteeism in junior high school students. The program to be reported on was developed in such a way as to facilitate its adoption by schools with their regular staffs and budgets. Therefore, only social reinforcement was used, and the amount of staff time required was kept to a minimum.

METHOD

Subjects and Setting

The attendance program operated within the context of the PREP project at a rural middle school in a community outside the Washington metropolitan area. The subjects were three groups of eighth grade students matched by sex and achievement test scores. Each group was composed of 18 male and 14 female students. The mean achievement rate was between 5.9 and 6.0 grade level for all three groups.

The first group of subjects were students enrolled in the academic phase of PREP. These students attended individualized reading, math, and English classes three periods a day, along with their regularly-scheduled classes. This group served as the experimental group. The second group of subjects were students participating in the social skills component of PREP. They

received intensive social skills training one class period a day, while attending six other regular school classes. The third group, which served as the no-treatment control subjects, were students who did not participate in any PREP programs or activities.

Procedure

Absentee data were obtained from a daily absentee list compiled by the guidance office and distributed to all teachers. From this list, individual daily cumulative records of absenteeism were kept for all three groups of students.

The first quarter of the school year was used as a baseline period for all three groups of students. During this time, the regular school attendance policy was in effect for all students. This policy focused totally on actions to be taken after excessive absences. Students who had been absent on three consecutive days were to be contacted by phone by the school nurse. Students with either five days of unexcused absence (no note from parents) or 15 days of excused absence during one marking period were not passed for the course. This policy remained in effect throughout the study for the two comparison groups (see Appendix for complete policy).

At the beginning of the second marking period, two changes in the school attendance policy were made for the experimental group. The first of these changes was the addition of "positive" phone calls and letters to parents when their children had attended school for a prescribed number of consecutive days. The second change was an increase in the immediacy with which parents received phone calls and letters when their children were absent. These phone calls and letters were to insure that the parents were aware of the absence, to inform them of the school's attendance policy, and to express concern on behalf of PREP and the school.

The schedule for the "positive" phone calls and letters for attendance and follow-up calls for absenteeism was initially determined by the rate of a student's absence during the first nine-week period. Student attendance records were then maintained on a daily basis, and these up-to-date records provided the basis for determining the schedule of phone calls for the remainder of the school year. Four rates of absenteeism were decided upon:

- Rate A: Two days absent per month,
- Rate B: Three days absent per month,
- Rate C: Four or five days absent per month, and
- Rate D: Six or more days absent per month.

Table 1 was used to determine the rate of absenteeism of a student during any particular month of the school year. Each of these four rates corresponded to a particular schedule of reinforcement (Table 2).

Insert Tables 1 and 2.

It can be seen from this table that the parent of a student with an absence rate of A would receive a positive phone call or letter after 10 consecutive days of attendance, while a parent of a student with an absence rate of D would receive a positive call or letter after three consecutive days of attendance. Students whose rates of absenteeism were below the lowest rate received positive phone calls or letters after 20 consecutive days of attendance. This flexible schedule was designed to allow for a thinning or enriching of the schedule of reinforcement as the student made progress or regressed.

All students whose absence rates were B, C, or D were considered attendance problems. This was based on the report of the principal that absenteeism totaling more than 20 days a year (11.1 percent) was not acceptable.

This is consistent with Rankin (1961), who, after an extensive review of school attendance records and reasons for absenteeism, concluded that 91 percent was a reasonable and acceptable percentage for students.

Follow-up phone calls to the parents of these students were made on the first day of any absence. For students in the experimental group whose rates of absence were lower than two days per month, follow-up phone calls or letters were made on the second consecutive day of absence.

All phone calls, letters, and cumulative records for each student were the responsibility of a member of the PREP staff. This person was a non-professional data aide, who received special training for these tasks.

Results

The mean and standard deviation for the number of days absent during the program year (1974-75) and the preceding year (1973-74) are presented in Table 3. Both the experimental and control groups do not include 32 subjects because of either incomplete records or the transfer of students to other schools. It can be seen from this table that during the year prior to the program, the control group showed less absence than either of the other two groups. During the program year, this difference was totally wiped out for the social group and almost completely eliminated for the academic group.

Insert Table 3.

These data were first analyzed with an analysis of covariance, with the absence for the previous year serving as the covariate. An F of 7.60, significant at the .01 level was obtained. Comparisons between means, using the Newman-Keuls procedure, revealed that the social and control groups differed

significantly from each other (.05), and both the academic versus control and social versus academic comparisons were marginally significant (.10).

Additionally, an analysis of covariance was performed with the data from the program year only. For purposes of this analysis, absences during the first marking period (before the special program began) were used as the covariate. No significant differences were found between groups.

Finally, subjects were divided on the basis of whether or not they had improved in attendance from the 1973-74 school year to the 1974-75 school year. Table 4 summarizes the results of this comparison.

Insert Table 4.

These data were compiled because they are not so sensitive to the effects of one or two individuals with excessive absences. Chi square analyses were performed on these data to determine if there was a relationship between progress from 1973-74 to 1974-75 and program condition. Two-by-two analyses showed significant differences between academic and control ($p<.05$) and marginally significant differences between social and control ($p<.10$). No differences were present between academic and social.

DISCUSSION

The results of this study are clear in some respects but ambiguous in others. First, it seems apparent from comparisons between 1973-74 and 1974-75 attendance records that both the social group and academic group improved significantly in relation to the control group. For the academic group, this was most clear in the chi square analyses, where the effects of very high absence rates by two individuals did not eliminate the generally positive

results with the remainder of the group. Marginal differences were also found on the analysis of covariance between the control and academic groups. Precisely the opposite picture appeared for the social group. Differences between this group and the control group were larger on the analysis of covariance and only marginally significant on the chi square analysis.

One of the first questions that these results raises has to do with separating the specific effects of the attendance program from the general effects of involvement in the PREP program. This is problematical for two reasons. First, the social group, which did not participate in the special attendance program, showed improvement nonetheless, suggesting general effects. Second, the analysis of covariance with the attendance for the first marking period serving as the covariate did not show significant differences. This may have been partly due to the fact that there were positive effects already present during the first marking period, before the special attendance program began, simply as a result of students' participation in PREP. It seems likely, however, in reviewing the attendance data across marking periods, that this failure to find significant differences was also due to extremely high absences in the latter part of the year by two students. Without these two students, who totaled 59 and 39 days absent the last two marking periods, respectively, the data show a consistent improvement in the academic group relative to the control group across the school year.

It appears, therefore, that the results of this study are due to a combination of general effects due to the program features of PREP, and specific effects, due to the attendance program. It does not appear, however, that the special procedures of the attendance program were adequate for students with high degrees of absence the previous year. The three students in the academic group with the highest rates of absence during the 1973-74 year all increased

in absences during the 1974-75 year. One interesting point should be noted--of the total subject population of 88 students, seven students were without home phones. Consequently, they had to be contacted through the use of letters. These included the three academic students with the highest absentee rates. For students with extremely high absence rates, additional steps would seem to be required.

The effects of the special attendance program in the academic group may also be seen in additional analyses performed as part of a general evaluation of the PREP program for 1974-75. These analyses involved a series of product moment correlations between three measures of individual student success in the program: (1) residual gain scores from the prior year to the present year in attendance; (2) residual gain scores from pre-test (given in September, 1974) to post-test (given in May, 1975) on the Stanford Achievement Test (SAT); and (3) grade point average. These analyses were done separately for the academic, social, and control groups, and the results are summarized in Table 5.

Insert Table 5.

It can be seen from this table that the most sizeable correlations were obtained in the academic group, where gains in attendance were significantly correlated both with residual SAT gain scores ($r=+.52$, $p<.01$) and with grade point average ($r=+.40$, $p<.05$) (Filipczak et al., 1975). Further, the academic group significantly differed from the control group at the .01 level in the value of the correlation coefficient obtained in each of the three analyses. The consistent pattern revealed by these analyses was for high positive correlations in the academic group; low positive and non-significant correlations in the social group; and low, non-significant negative correlations in the control group.

It was pointed out earlier in this paper that one important issue concerning the relationship between absenteeism and juvenile delinquency concerns the relationship between absenteeism and other measures of school performance. It can be seen from the analyses just reviewed that it is not possible to make general statements about these relationships, even when the analysis is restricted to progress made from one year to the following year. It does appear that the academic program, with the special attendance features included, tended to have across-the-board gains with those students who benefited, in contrast to the other two groups.

It should also be reiterated that the special attendance program described in this report was conducted with a minimum of expense and staff time. It included several important features which distinguished it from the existing school program and merit reemphasis. First, it very prominently included positive reinforcement for improved attendance, rather than totally focusing on calling parents when students were absent. Second, it was a flexible system that included different schedules of reinforcement and different frequencies of follow-up phone calls as a function of the student's personal attendance record. Third, it involved close monitoring of student absences on a day-to-day basis.

At the present time, the specific effects of the attendance program cannot be clearly determined. Replication of these procedures is clearly indicated. It appears, however, that the simple and inexpensive procedures utilized in this program have the potential for improving attendance in students with moderate absentee problems.

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	ABSENTEEISM RATES			
MONTH	A	B	C	D
September	2	3	4-5	6+
October	3-4	5-7	8-10	11+
November	5-6	7-11	12-15	16+
December	7-8	9-14	15-20	21+
January	8-10	11-19	20-25	26+
February	9-12	13-21	22-30	31+
March	11-14	15-25	26-35	36+
April	12-16	17-27	28-40	41+
May	14-18	19-32	33-45	46+
June	15-20	21-35	36-50	51+

Table 1
Cumulative Number Days Absent by Month

Rate	Reinforce Every:	Until Student is in School for:	Then Go to Rate:
D	3 consecutive days that student is in school	2 consecutive weeks of 0 absence or 4 consecutive weeks of 1 or less absence	C
C	4 consecutive days that student is in school	2 consecutive weeks of 0 absence or 4 consecutive weeks of 1 or less absence	B
B	5 consecutive days that student is in school	3 consecutive weeks of 0 absence or 4 consecutive weeks of 1 or less absence	A
A	10 consecutive days that student is in school	4 consecutive weeks of 1 or less absence	--
--	20 consecutive days that student is in school	2 consecutive months of 1 or less absence each month	--

Table 2
Schedule of Positive Reinforcement

	n	1973-74 $\bar{X}$	1973-74 SD	1974-75 $\bar{X}$	1974-75 SD	Difference
Academic	30	12.83	7.4	13.13	16.3	+ .30
Social	32	13.87	10.9	10.96	11.2	-2.91
Control	25	8.92	8.4	12.73	12.6	+3.81

Table 3
Mean Number of Absences for 1973-74 and 1974-75

Group	Number Improving	Number Worse
Academic	21	9
Social	22	10
Control	10	15

Table 4
Number of Students Improving from 1973-74 to 1974-75

	ACADEMIC	SOCIAL	CONTROL
SAT-Attendance[1]	+.52**	+.25	-.22
SAT-GPA[2]	+.40*	+.15	-.26
Attendance-GPA[3]	+.63**	+.10	-.12

* $p < .05$
** $p < .01$

[1]Significant difference between Academic & Control ($p < .01$), and significant difference between Social & Control ($p < .10$).

[2]Significant difference between Academic and Control ($p < .01$), and significant difference between Social and Control ($p < .10$).

[3]Significant difference between Academic and Control ($p < .01$), and significant difference between Academic & Social ($p < .05$).

Table 5
Correlations Between SAT Residual Gain Scores, Attendance Residual Gain Scores, and Grade Point Average

APPENDIX

School
Attendance Policy

1. The Homeroom Teacher will take attendance. He/she will send the cards of the students who are absent to the cafeteria at 8:50. He/she will ask those students who are back in school after an absence for notes from parents concerning the absence. If the student does not have a note from parents, the absence is considered unexcused. The teacher will send a list of students having unexcused absences the previous day to the guidance office. (Use previous day's Absentee List to confirm.)

2. Five (5) unexcused days of absences during a quarter (marking period) will automatically fail a student.

3. If a student is absent 3 consecutive days, the guidance secretary will notify the nurse who will contact the home. The nurse will report information obtained from the home to the student's advisor.

4. After 3 days of unexcused absences, the home will be contacted and informed of failure policy--by a letter sent by guidance department secretary.

5. After 15 days of excused absence during one marking period, a student will be given an INCOMPLETE as a grade and work will have to be made up to the teacher's satisfaction by the end of the next marking period or the INCOMPLETE will become an E (failure).